

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An assay for determining the concentration of rapamycin or a rapamycin analog concentrations in a sample, the rapamycin or rapamycin analog being capable of binding to FKBP12 protein or a binding domain thereof, the assay comprising:

- (i) contacting the sample with ~~PKBP12~~ FKBP12 protein, or with a rapamycin binding fragment of ~~said PKBP12~~ the FKBP12 protein that maintains the rapamycin binding properties, for a time period and under conditions allowing formation of rapamycin/FKBP12 complex;
- (ii) contacting the rapamycin/FKBP12 complex with a complex-binding domain of mTOR for a time period and under conditions enabling binding of the complex to the ~~said~~ complex-binding domain;
- (iii) detecting the amounts of said complex-binding domain that is bound to the rapamycin/FKBP12 complex;
- (iv) comparing the amounts detected in (iii) to a calibration curve, thereby determining the ~~rapamycin~~ concentration[[s]] of the rampamycin in the sample.

2. (Currently Amended) The assay ~~[[of]]~~ according to claim 1, wherein the said rapamycin being native rapamycin or synthetically produced rapamycin, or any analog of the two.

3. (Currently Amended) The assay ~~[[of]]~~ according to claim 1, wherein the said sample is a liquid, a solid or a semi solid sample.

4. (Currently Amended) The assay ~~[[of]]~~ according to claim 3, wherein the said liquid sample is a body fluid selected from the group consisting of plasma, blood, serum, urine, sperm~~[[, or]]~~ cerebral spinal fluid.

5. (Currently Amended) The Assay of claim 3, wherein the said solid sample is a tissue.

6. (Currently Amended) The assay of claim 3, wherein the said sample is semi-solid sample selected from the group consisting of tissues or feces.

7. (Currently Amended) The assay according to claim 4, wherein the said liquid sample is mammalian blood.

8. (Currently Amended) The assay according to claim 1, wherein the said FKBP12 protein is a full FKBP12 protein being a 12kDa protein or a fragment of FKBP12 protein that maintains the rapamycin binding properties of the full protein.

9. (Original) The assay according to claim 1, wherein the FKBP12 protein or the fragment thereof is immobilized on a solid substrate.

10. (Currently Amended) The assay according to claim 9, wherein the said solid support is a 96-well microtiter plate.

11. (Currently Amended) The assay according to claim 10, wherein the said microtiter plate is blocked by non specific protein.

12. (Currently Amended) The assay according to claim 1, wherein the said detection is achieved by an ELISA reader.

13. (Currently Amended) The assay ~~[[of]]~~ according to claim 1, wherein the said complex binding domain of mTOR is a FRB fragment.

14. (Currently Amended) The assay according to claim 13, wherein the said FRB fragment is directly bound to a detectable label.

15. (Withdrawn) The assay according to claim 13, wherein said FRB fragment is indirectly bound to a detectable label.

16. (Currently Amended) The assay according to claim 14, wherein the said label is capable of generating a signal detectable by a technique selected from the group consisting of coloremtry, spectrophotometry, fluorospectrophotometry, gaseometry [[or]] and radiospectrometry.

17. (Currently Amended) The assay according to claim 16, wherein the said detectable label is an enzyme capable of producing, in the presence of a suitable substrate, a color reaction.

18. (Currently Amended) The assay according to claim 17, wherein the said enzyme is alkaline phosphatase or HRP enzyme.

19. (Currently Amended) The assay according to claim 18, wherein the said enzyme is used with a color-forming reagent or reagents selected from the group consisting of p-nitrophenyl phosphate, hydrogen peroxide, o-phenylenediamine and 3,3',5,5'-Tetramethylbenzidine.

20. (Currently Amended) A kit for determining rapamycin concentrations, or rapamycin analog concentrations in a sample, the kit comprising:

[[(i)]] a FKBP12 ~~PKBP12~~ protein or a rapamycin binding portion thereof immobilized on a solid substrate; and

[[(ii)]] a complex-binding domain of mTOR linked to a label that may be detected or that may generate a signal.

21. (Currently Amended) The kit ~~[[of]]~~ according to claim 20, wherein the ~~said~~ complex binding domain of mTOR is provided in separate vessel.

22. (Currently Amended) The kit according to claim 20, wherein the ~~said~~ complex binding domain of mTOR is the 93-amino acids FRB domain, linked to a label that can be detected or that can generate a signal.

23. (Currently Amended) The kit according to claim 22, wherein the ~~said~~ label is capable of generating a signal detectable by a technique selected from the group consisting of coloremtry, spectrophotometry, fluorospectrophotometry, gaseometry ~~[[or]]~~ and radiospectrometry.

24. (Currently Amended) The kit according to claim 22, wherein the ~~said~~ label is capable of producing a colorimetric reaction.

25. (Currently Amended) The kit according to claim 22, wherein the said label is an enzyme capable of producing, in the presence of a suitable substrate, a colorimetric reaction.

26. (Currently Amended) The kit according to claim 25, wherein the said enzyme is alkaline phosphatase enzyme or HRP enzyme.

27. (Withdrawn) The kit according to claim 22 further comprising antibodies which are conjugated to an enzyme capable of producing a colorimetric reaction.

28. (Withdrawn) The kit according to claim 27, wherein said antibodies are directed against the FRB fragment.

29. (Withdrawn) The kit according to claim 24, wherein said antibodies are directed against a tag to which FRB or FRB fragment are being conjugated.

30. (Withdrawn) The kit according to claim 22 further comprises the label required to generate a signal detectable by a technique selected from coloremtry, spectrophotometry, fluorospectrophotometry, gaseometry or radiospectrometry.

31. (Currently Amended) The kit according to claim 22, further comprising pre-weighed samples of rapamycin and rapamycin analogs for producing calibration curves.

32. (Withdrawn) The assay according to claim 15, wherein said label is capable of generating a signal detectable by a technique selected from coloremtry, spectrophotometry, fluorospectrophotometry, gaseometry or radiospectrometry.